

REMARKS

Amendments to the claims

Claims 1-44 are pending in the application. Claims 1, 2, 13, 14, 23 and 38 have been amended. New claims 45-48 have been added. The amendments have been introduced for clarity purposes only. Support for the amendments can be found, for example, at page 1, line 16, Figures 3 and 4 and related portions of the specification of the application as filed. Support for the new claims can be found, for example, at page 5, lines 19-21 of the application as filed. No new matter has been added.

Claim rejections – 35 USC § 102

In the Action, the Examiner rejects claims 1-4, 7-11, 13-16, 19-27, 29-33, 37-42 and 44 under 35 USC § 102(e) as being anticipated by Yeh (U.S. Pat. No. 6,413,847). Applicants respectfully disagree.

Claims 1, 13, 23 and 38 recite an “*extraneous conductive line*” and an “*extraneous via hole*” forming “*an extraneous path, not connected to the operational functionality of the circuit, in order to confuse a reverse engineer.*” Applicants note that Yeh discloses a dummy metal pattern. However, the dummy pattern in Yeh is a bi-dimensional structure formed only by Yeh’s conductive lines and does not include an “*extraneous via hole*.” Although via holes are disclosed in Yeh, it is believed that there is no disclosure or teaching in Yeh of an “*extraneous path*,” i.e. a path “*not connected to the operational functionality of the circuit*” formed by “*at least one conductive line*” and an “*extraneous via hole . . . to confuse a reverse engineer.*”

Applicants also note that in at least five different instances, Yeh states that the presence of the dummy metal pattern is indeed connected to the operation of the circuit: 1) the dummy metal pattern “can avoid a loading effect while fabricating a metal interconnect.” (Yeh, column 2, lines 3-4); 2) “[t]he method can enhance reliability of devices and increase yield.” (Yeh, column 2, lines 7-8); 3) “the invention can effectively

reduce noise and increase transmission speed." (Yeh, column 4, 53-54); 4) "the loading effect can be avoided to enhance device reliability and increase device yield." (Yeh, column 5, lines 63-64); 5) "[a]nother advantage . . . is to . . . make uniform the metal line pattern for the benefit of subsequent processes." (Yeh, column 5, line 66 through column 6, line 2). Similar observations are also present in Yeh's abstract.

Therefore, independent claims 1, 13, 23 and 38 are novel over Yeh, together with claims 2-4 and 7-11 by virtue of their dependence on claim 1, claims 14-16 and 19-22 by virtue of their dependence on claim 13, claim 24-27, 29-33 and 37 by virtue of their dependence on claim 23, and claims 39-42 and 44 by virtue of their dependence on claim 38.

Claim rejections – 35 USC § 103

In the Action, the Examiner rejects claims 5, 6, 12, 17 and 18 under 35 USC § 103(a) as being unpatentable over Yeh. Applicants respectfully disagree.

Claims 5, 6 and 12 depend on claim 1, thus implicitly reciting the features of claim 1. Claims 17 and 18 depend on claim 13, thus implicitly reciting the features of claim 13. Therefore, claims 5, 6, 12, 17 and 18 implicitly recite the "*extraneous conductive line*" and an "*extraneous via hole*" forming "*an extraneous path, not connected to the operational functionality of the circuit, in order to confuse a reverse engineer.*" , which features, in combination, are not believed to be disclosed in Yeh, as argued above. Therefore, a *prima facie* § 103(a) case cannot be made against claims 5, 6, 12, 17 and 18.

Additionally, Applicants point out that the independent claims of the present application recite methods and apparatus which "*confuse the reverse engineer,*" while Yeh's invention enhances reliability and yield of a circuit (see above), thus teaching against the present invention.

Therefore, claims 5, 6, 12, 17 and 18 are patentable over Yeh.

Allowable claims

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Applicants acknowledge with gratitude the Examiner's indication of allowability as to claims 28, 34-36 and 43 if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that also the claims on which claims 28, 34-36 and 43 depend are patentable, as shown above, so that rewriting of claims 28, 34-36 and 43 in independent form is not necessary.

New claims

New claims 45-48 have been added to further distinguish the present invention against the cited art. Also the newly introduced claims are believed to be patentable.

* * *

Applicants submit that all claims of the application as amended herein are in condition for allowance. Prompt issuance of a Notice of Allowance is earnestly solicited.

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The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136 (a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 on

February 11, 2005

(Date of Deposit)

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Signature

2/11/05

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Respectfully submitted,



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Encls.:

- Sheet showing calculation of excess claims fees
- Check in the amount of \$ 200
- Postcard